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09/774,841	01/31/2001	Christos Karamanolis	10008124-1	6264

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EXAMINER	
BOUTAH, ALINA A	

ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/774,841	KARAMANOLIS ET AL.	
	Examiner	Art Unit	
	Alina N Boutah	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-7 and 16-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7 and 16-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This action is in response to Applicant's amendment filed October 17, 2005. Claim 2 has been cancelled. Claims 1, 3-7 and 16-25 are pending in the present application.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 is rejected because the specification fails to disclose the second processor arrangement that performs the function as claimed.

Claim 16 is rejected because the specification fails to disclose a file interface card, which includes a substrate for removable coupling to system bus and the substrate having a processor and a specifically configured memory as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7 and 16-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,212,640 issued to Abdelnur et al. (hereinafter Abdelnur) in view of USPN 6,493,768 issued to Boutcher.

(Amended) Regarding claim 1, Abdelnur teaches a file interface arrangement for providing remote file access to a data processing system via a network, the data processing system including a first processor arrangement coupled to a system input/output bus, wherein the first processor arrangement of the data processing system executes an operating system and a network file system (NFS) client application, the file interface arrangement comprising:

a bus-interface circuit arranged to interface with the system input/output bus (figure 7: 718);

a processor arrangement coupled to the bus-interface circuit (figure 7: 713);

a memory coupled to the processor arrangement, the memory configured with program code that is executable by the processor arrangement and that implements a standard NFS client protocol, and a network protocol stack (figure 7: 715);

a network-interface circuit arrangement coupled to the processor arrangement and arranged to send data received from the processor over the network and receive data via the network (figure 7: 720); and

an interceptor module coupled to the operating system and to the system bus, the interceptor module configured and arranged to intercept NFS-client calls from the NFS client application and send NFS-client calls to the processor arrangement via the system bus (figure 2; col. 6, lines 22-59).

However, Addelnur fails to explicitly teach a second processor arrangement, which executes code that implements the standard NFS client protocol along with at least one non-standard extension to the NFS client protocol. Boutcher teaches a multiple processor arrangements (figures 2A:18 and 2B:28) and a non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 3, Boutcher teaches the arrangement of claim 2, wherein the operating system includes a message stream and the interceptor module is configured and arranged to intercept NFS messages from a message stream of the operating system (col. 6, line 30-45).

Regarding claim 4, Boutcher teaches the interface arrangement of claim 3, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 5, Abdelnur teaches the arrangement of claim 2, wherein the operating system includes an RPC software layer, and the interceptor module is configured and arranged to intercept packets from the RPC layer of the operating system (col. 6, lines 40-59).

Regarding claim 6, Boutcher teaches the interface arrangement of claim 5, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 7, Boutcher teaches the interface arrangement of claim 4, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 16, Abdelnur teaches a file interface card, comprising:

a substrate having connectors for removably coupling to a system input/output bus of a data processing system (figure 7);

at least one integrated circuit arrangement disposed on the substrate and coupled to the connectors, the at least one integrated circuit arrangement including, a bus-interface circuit arranged to interface with the system input/output bus (figure 7:718);

a processor arrangement coupled to the bus-interface circuit (figure 7:713);

a memory coupled to the processor arrangement, the memory configured with program code that is executable by the processor arrangement and that implements a standard NFS client protocol responsive to an NFS client application executing on the data processing system and a network protocol stack (figure 7: 715); and

a network-interface circuit arrangement coupled to the processor arrangement and arranged to send data received from the processor over the network and receive data via the network (figure 7: 720).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 17, Boutcher teaches the file interface card of claim 16, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 18, Abdelnur teaches a data processing system, comprising:

a first processor configured to execute an operating system and an NFS client application (figure 7: 713);

a system input/output (I/O) bus coupled to the processor (figure 7:719);

a network interface card coupled to the system I/O bus, the network interface card arranged to send data received from the first processor over a network and receive data via the network (figure 7: 720); and

a file interface card coupled to the system I/O bus, wherein the tile interface card implements a standard NFS client protocol responsive to the NFS client application executing on the first processor, and is adapted to send NFS requests over the network and receive NFS data via the network (figure 7: 720).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 19, Abdelnur teaches wherein the file interface card comprises:

a bus-interface circuit arranged to interface with the system input/output bus (figure 7: 719);

a second processor coupled to the bus-interface circuit (figure 7: 713);

a memory coupled to the processor arrangement, the memory configured with program code that is executable by the second processor and that implements the standard NFS client protocol and the network protocol stack (figure 7: 715); and

a network-interface circuit arrangement coupled to the processor arrangement and arranged to send data received from the second processor over the network and receive data via the network (figure 7: 720).

However, Addelnur fails to explicitly teach at least one non-standard extension to the NFS client protocol. Boutcher teaches non-standard extension to the NFS client protocol (abstract; col. 2, lines 21-33; col. 8, lines 24-55; figure 4).

At the time the invention was made, one of ordinary skill in the art would have been motivated to implement a non-standard extension to the NFS client protocol in order to permit client to remotely accessing files in multiple of servers regardless of the servers, thus improving the performance of the NFS.

Regarding claim 20, Abdelnur teaches the system of claim 17, further comprising an interceptor module coupled to the operating system and to the system bus, the interceptor module configured and arranged to intercept NFS-client calls from the NFS client application and send NFS-client calls to the second processor via the system bus (figure 2; col. 6, lines 22-59).

Regarding claim 21, Boutcher teaches the system of claim 20, wherein the operating system includes a message stream and the interceptor module is configured and arranged to intercept NFS messages from a message stream of the operating system (col. 6, line 30-45).

Regarding claim 22, Boutcher teaches the system of claim 21, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 23, Abdelnur teaches the arrangement of claim 20, wherein the operating system includes an RPC software layer, and the interceptor module is configured and

arranged to intercept packets from the RPC layer of the operating system (figure 2; col. 6, lines 22-59).

Regarding claim 24, Boutcher teaches the interface arrangement of claim 23, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a meta-data server (figure 4).

Regarding claim 25, Boutcher teaches the interface arrangement of claim 19, wherein at least one non-standard extension to the NFS client protocol includes an interface to one or more of a storage area network, a database system, a name server, or a metadata server (figure 4).

Response to Arguments

Applicant's arguments filed October 17, 2005 have been fully considered but they are not persuasive.

In response to Applicant's argument that the Abdelnur-Boutcher combination does not suggest of both a network interface card and a file interface card, the PTO respectfully submits that figure 7, element 720 of Abdelnur clearly teaches a network interface card. A "file interface card" is a card that receives the intercepted NFS-RPCs (see applicant's abstract). Figure 2, element 230, as well as col. 6, lines 40-59 of Abdelnur discuss receiving and processing NFS-RPC requests. One of ordinary skill in the art would have recognized that in order to process this request, there must be some kind of interface card for receiving and transmitting the request. In

this case, this is interpreted as a file interface card as claimed. For this reason, the rejection of claim 18 is sustained.

Regarding claim 16, Applicant has failed to define a "substrate" as claimed; therefore the PTO has given its most reasonable interpretation. In this case, it is interpreted as a base layer of the network card that can be removable coupled to a system bus. Although Abdelnur-Boutcher combination does not explicitly disclose a substrate, it discloses network interface cards (Abdelnur: figures 2 and 7; Boutcher: figures 2A and 2B). Also, it is well known in the art of computing that network interface cards consist of some kind of memory and processor. For this reason, the rejection of claim 16 is sustained.

Claim 1 has been amended to include the limitations of claim 2 and further amended to include a second processor arrangement, which was not supported anywhere in the specification. Therefore the argument will not be considered until Applicant shows in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N. Boutah whose telephone number is 571-272-3908. The examiner can normally be reached on Monday-Friday (9:00 am - 5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANB

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WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER